

EMERGENCY RESCUE

MANUAL 64-1

SURVIVAL ON THE
ICE CAP, COLD SEAS, SEA ICE
OF THE NORTHEAST AREA



15 SEPTEMBER 1959

HEADQUARTERS EIGHTH AIR FORCE

MANUAL
No. 64-1

HEADQUARTERS EIGHTH AIR FORCE
Westover Air Force Base, Massachusetts
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FOREWORD

PURPOSE: To (1) provide a readily available source of localized survival information to aircrews participating in the daily air operations of this command and (2) supplement the arctic sections of AFM 64-5 (the basic survival manual included in each standard Air Force survival kit).

This manual should be carried by each crew member at all times when engaged in flights in the Northeast overseas area and should be studied often in preparation for a possible survival situation. When used in conjunction with AFM 64-5, it provides a comprehensive coverage of survival problems and situations which may be encountered in the arctic and subarctic regions of the Northeast overseas area.

FOR THE COMMANDER:



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OPI: DDT

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PART IV

THE EQUIPMENT YOU SHOULD HAVE

Throughout this manual a rather pessimistic view has been taken with regard to the amount and type of survival equipment you might have in a survival situation. Naturally, it is impossible to determine what will be salvaged in a crash landing in a remote area. Thus, it is better from the standpoint of survival instructions to assume that you will have only the barest minimums. In most cases this will not be true. Only in a bail-out will you be pressed for supplies, and then normally only after a short time, inasmuch as your ejection or bail-out kit contains some equipment and rations. Airdrops from rescue aircraft should supplement this supply.

It is surprising how many survival accounts indicate unnecessary hardship because the victims did not know the uses - and in some cases - the contents of their survival kits. Because of this, a section on standard Strategic Air Command survival kits and equipment is included in this manual.

Actually, no SAC aircraft leaves the ground without survival equipment of some type on board. What type of equipment you have on board will depend on the section of the world in which you fly and the time of the year that the flight is made. In the following paragraphs excerpts from SAC REG 60-8 are included. A study of this section will acquaint you with the survival equipment carried for various types of SAC aircraft in various types of circumstances and the type of personal gear needed by crew members and passengers.

Extracted from SAC REG 60-8 and 8AF Supplement 1 thereto:

1. Definitions:
 - a. High altitude flights - 30,000 to 50,000 feet.
 - b. Overwater flights - all flights during which the aircraft exceeds power-off gliding distance from the nearest land or ice mass suitable for bail-out or crash.
 - c. Desolate terrain flights - mountainous, desert, jungle, arctic, sub-arctic and/or uninhabited areas where availability of immediate aid in the event of an emergency would be remote.
2. Crew member and passenger personal equipment for high altitude flights:
 - a. Oxygen mask, pressure demand, type MS 2201 (A-13A) or equivalent pressure demand equipment with MC-3 or MC-3A adapter for use with E2 or MD-1 emergency oxygen cylinder.

Diluter demand oxygen mask, type A-14, may be substituted where the foregoing types are not available, but only for flights below 35,000 feet. The type A-14 mask will not be used as a pressure demand mask.

- b. Emergency oxygen cylinder, E2 or MD-1
- c. Helmet, flying, P-type, or equivalent, for jet aircraft; and helmet, type A-10A, A-11, or A-13, standard with goggles, Type B-8A, for conventional aircraft.
- d. Jacket, flying, intermediate, type B-15, MA-1, or equivalent in thermal insulation qualities.
 - e. Type L-2 jacket is authorized in clothing allowance zones 2 through 6. The L-2 jacket may be authorized in Zone 7 only by this headquarters.
 - f. Flying suit, type K-2B, or equivalent.
 - g. Knife, with sheath, not to exceed 9 inches overall length, securely attached to prevent loss during bail-out.
 - h. Glove set, flying, leather shell, wool insert, type MA-1, or equivalent in thermal insulation qualities.
 - i. Boot, combat, aircrew and overshoes, flying, type A-1, A-6A) combination; or high-topped (laced) footgear of equal or better thermal insulation qualities.
 - j. Parachutes. AFR 60-5 and applicable SAC regulations will apply. Parachutes equipped with automatic parachute ripcord release are required on all aircraft operating above 35,000 feet. Applicable aircraft technical orders will be followed with regard to wearing and carrying of parachutes.
3. Crew member and passenger personal equipment for overwater flights.
 - a. Life vest, type B-5, or underarm flotation equipment when available. This equipment will be worn prior to overwater portions of flights; worn on all overwater flights in ejection-seat equipped aircraft; and at altitudes below 5,000 feet or as prescribed by the aircraft commander in non-ejection seat equipped aircraft.
 - b. C-2A (not applicable to passengers on aerial refueling and transport type aircraft). Crewmembers of ejection-seat equipped aircraft will have the PK-2 raft in the A-1 (modified) survival kits. Extra crewmembers or passengers in B-52 aircraft, not occupying ejection seats, will be equipped with Type C-2A or MB-2 liferaft kits.

c. Type R-1 quick-donning antiexposure suit or equivalent for flights over cold water (55° F and below). Wearing of the R-1 antiexposure suit will be at the discretion of the division or wing commander.

d. When overland flight operations are conducted from bases in the vicinity or adjacent to large bodies of water, i.e. oceans, lakes, rivers, all crewmembers and passengers may be required to wear life vests at the discretion of the division or wing commander.

e. For flights over the Arctic Ocean (Polar Basin) the following heavy clothing, in addition or in replacement of items d, e, f, and h, as listed under high altitude equipment, will be worn or be within the immediate possession of the individual:

- Cap, field, pile
- Jacket, flying, Type N-3B
- Trousers, flying, Type D-1B
- Liner, flying, trousers, Type E-1B
- Shirt, flying, Type A-1B
- Boot, mukluk, N-1B with inserts, assembly
- Sock set, mukluk
- Socks, wool, cushion sole (2 pairs)
- Mitten, set, flying, type N-4B
- Glasses, sun
- Mask, face, arctic

Carrying of life vests and multiple life rafts for flights conducted over the Arctic Ocean (Polar Basin) during the period November through May will be at the discretion of the division or wing commander.

f. The aircraft commander will insure that sufficient quantity of life rafts to accommodate all passengers is aboard the aircraft.

4. Desolate terrain flights. Personal equipment requirements for flights over desolate terrain are the same as for high altitude flights. However, during winter months for operation into or out of the intermediate or colder temperature zones, or during summer months for operation into or out of the extra heavy temperature zone, the aircraft commander will insure that each crew member or passenger is wearing, or has in his immediate possession, adequate cold weather clothing for ground protection during a cold weather emergency survival situation. This is the same clothing required for flights over the Arctic ocean, listed under overwater flight requirements.

5. Survival Kits. a. The following survival kits will be carried for aircraft as indicated:

TYPE ACFT	NR IN CREW	MAX NR OF PASGRS EWO	SURVIVAL KIT UTILIZATION			
			A-1	E-1	D-1-2	RS-6
B/RB-47E	3	1	3			1
B-47 ECM	5	1	5			1
RB-47E	6		6			1
B-52	6	3	6			1
RB-52	8	1	8			1
KC-97E/F	7	59		7	4	
KC-97G	7	57		7	4	
KC-135	4	76	4		5	
C-47	5	27		5	2	
C-54	6	54		6	4	
VC-97	6	70		6	4	
C-123	5	25		5	2	
SA-16	5	10		5	1	
L-20	1	3		1		
H-21	2	10		2	1	

b. Ejection seat type kits (A-1 modified) will be properly attached to the parachute harness at all times seats are occupied during flights. E-1 kits will be properly stowed and readily available.

c. Air refueling and transport type aircraft, when carrying passengers outside the ZI on flights over continental land masses and/or ice covered water masses, will carry one D-1-2 survival aircraft kit for each 15 passengers or major fraction thereof, but will not exceed the total number of kits per aircraft specified herein. These kits will be stowed in such a manner as to insure most expeditious off-loading in the event of a crash landing.

6. Emergency radio kits. a. Radio kit, long range, type RS-6, will be carried as specified by type aircraft, on all flights maneuvering outside the ZI when overflying continental land masses and/or ice covered water masses. On overwater flights and/or water flights within the Zone of Interior carrying of the RS-6 kit will be at the discretion of the division or wing commander.

b. AN/URC-4 radio kits will be carried on all flights in accordance with TA 1-21 allowances. Carrying of the AN/URC-4 on local areas or engineering test flights, not penetrating areas of desolate terrain, will be at the discretion of the division or wing commander.

7. Life rafts: a. Life rafts with appropriate accessory kits will be aboard the following aircraft, as specified when indicated number of passengers are carried:

TYPE ACFT	NR IN CREW	MAX NR OF PSGRS BWO	1 MAN	1 MAN	4 MAN	20 MAN	AN/ CRT-3
			RAFT (C2-A)	RAFT (PK-2)	RAFT	RAFT	RADIO
B/RE-47E	3	1	1	3			
B-47 ECM	5	1	1	5			
RE-47H	6			6			
B-52	6	3	3	6			
RE-52	8	1	1	8			
KC-97E/F	7	59	7		4	2	
KC-97G	7	57	7		4	2	
KC-135	4	76		4	4	2	
C-47	5	27	5		2	1	
C-54	6	54	6		3	2	
VC-97	6	70	6		4	2	
C-123	5	25			2	2	
SA-16	5	10	5		1	1	
L-20	1	3	1	1			
H-21	2	10			1	1	

ITEMIZED COMPONENTS FOR THE A-1 (MODIFIED) GLOBAL SURVIVAL KIT

Container, MD-1	1 ea
Raft, pneumatic, PK-2, with sea anchor assembly	1 ea
Rifle, survival, M-4, .22 Hornet	1 ea
Oiler, .30 M-1, carbine, with Jan D-644 oil	1 ea
Magazine, .22 Hornet, M-4	1 ea
Cartridge, jacketed, .22 Hornet, 35 grain M-65 or 45 grain M-39	100 ea
Matches, ordinary, water resistant	150 ea
Compass, ordinary, water resistant	1 ea
Compass, escape (button type)	1 ea
Ration, survival, Type RS-1 or RS-2	2 ea
Mirror, emergency signal	1 ea
Net, gill, fishing, 70 pound test	1 ea
Tabs, heat, box of 24	1 ea
Kit, first aid, survival, individual	1 ea
Goggles, ski, with spare lens	1 ea
Tablets, salt, 13 in plastic tube	3 tubes
Canteen, water, plastic	1 ea
Razor, safety, Travelalong, w/10 double edge blades	1 ea
Lipstick, anti-chap, type 1	1 ea
Spoon, Jan-F-284	1 ea
Socks, wool, ski	1 pr
Socks, wool, cushion sole	1 pr
Knife, pocket, general purpose	1 ea
Stone, sharpening, type VIII	1 ea
Desalter kit, MK-2, Spec. Mil-K-5531	1 ea
File, flat, smooth, 6 inch	1 ea
Radio, Transceiver, URC-4 (less vest)	1 ea
Manual, survival, AFM 64-5	1 ea

Kit, fishing, survival	1 ea
Wire, snare, brass, 0.025 inch, 20 ft coil	1 ea
Hat and mosquito net, M-1944	1 ea
Hood, wool, knit, M-1941	1 ea

ITEMIZED COMPONENTS FOR D-1-2 ARCTIC-DESERT-TROPICAL
AIRCRAFT SURVIVAL KIT

Kit, fishing, survival	1 ea
Wire, snare, brass, 20 foot coil	4 ea
Candle, wax	6 ea
Kit, medical, instrument-supply set, emergency, aeronautic	1 ea
Manual, survival, AFM 64-5	1 ea
Ointment, sun, protective	4 ea
Spoon, Jan-F-284	4 ea
Insect repellent, can assembly	4 ea
Compass, lensatic, dry type	1 ea
Signal, distress, MK-13, day, night	4 ea
Container, sled, Type A-16	1 ea
Container, gasoline, 1 gallon	1 ea
Broom, wisk	4 ea
Tissue, toilet, roll	4 ea
Goggles, ski, with spare lens	4 ea
Lipstick, anti-chap, type I	4 ea
Stove, gasoline	1 ea
Ration, survival, type RS-I or RS-II	24 ea
Ration, food packet survival, ST	12 ea
Signal, distress, Hi-altitude, rocket, Type M131	4 ea
Bag, sleeping, arctic	4 ea
Tent, 4-man, RCAF type, with pins and pole	1 ea
Rope, manila, 1/4 inch diameter	20 ft
Snowshoes, bear paws, with bindings	1 pr
Drawers, winter, M-1950, large	4 ea
Mitten, 4-piece, heavy, type M-1	4 ea
Sock Set, mukluk, 6 units	4 pr
Boot, mukluk, survival	4 pr
Hood, wool, knit, M-1941	4 ea
Poncho, coated cloth	4 ea
Sweater, hi-neck	4 ea
Undershirt, winter, M-1950	4 ea
Ax, camp	1 ea
Carrier, Ax	1 ea
Ice-Saw, snow-knife	1 ea
Knife, hunting, with sheath	4 ea
Machete, entrenching, M-1943	1 ea
Shovel, entrenching, M-1943	1 ea
Matches, ordinary, water resistant	350 ea
Starter, fire, M-2	6 ea
Flashlight, 2-cell	1 ea
Container, aerial delivery, type A-4 or type A-21	1 ea

ITEMIZED COMPONENTS OF E-1 EMERGENCY SUSTENANCE SURVIVAL KIT

Container, bailout, E-1	1 ea
File, flat, smooth, 6 inch	1 ea
Kit, fishing, survival	1 ea
Kit, first aid, survival, individual	1 ea
Rifle, survival, M-4, .22 Hornet	1 ea
Monocular, 6 x 30	1 ea
Compass, escape (button type)	1 ea
Compass, lensatic (dry type)	1 ea
Plotter, navigation, Weems	1 ea
Mirror, emergency signal	1 ea
Matches, ordinary, water resistant	300 ea
Candle, wax	1 ea
Bag, sleeping, mountain, M-1941, Type 1, large 100 percent down, vacuum packed	1 ea
Raincoat, survival	1 ea
Socks, wool, cushion sole	2 pr
Socks, wool, ski	1 pr
Boot, Mukluk, survival	1 pr
Gloves, wool, insert, mitten style	
Gloves, leather, mitten style, N-2	1 pr
Gloves, insert, nylon	1 pr
Goggles, ski, with spare lens	1 pr
Hat and mosquito net, M-1944	1 ea
Pan, frying	1 ea
Ax, hand, 1-1/4 pound	1 ea
Saw, knife assy, nail cutting	1 ea
Knife, hunting, with sheath	1 ea
Watch, wrist	3 ea
Stone, sharpening, type VIII	1 ea
Canteen, water, plastic	1 ea
Spoon, Jan-F-284	1 ea
Ration, survival, Type RS-I or RS-II	3 ea
Tablets, salt, 13 in plastic tube	3 ea
Chamois, 7 x 7 inches	1 ea
Soap, tissue, 100 per package	2 ea
Razor, Travelalong, w/10 double edge blades	1 ea
Lipstick, anti-chap, type 1	1 ea
Snare, Raymond Thompson, Type O	3 ea
Cartridge, .22 Hornet, 50 rounds per box M-65, 35 grain, or M-39, 45 grain jacketed	150 ea
Magazine, .22 Hornet, M-4	2 ea
Oiler, .30 M-1, with Jan-D-644 oil	1 ea
Net, gill, 70 pound test	1 ea
Manual, E-1 kit	1 ea
Manual, survival, AFM 64-5	1 ea

ITEMIZED COMPONENTS OF RS-6 RADIO KIT

Container, nylon, with polyvinyl shock absorbing material	1 ea
Radio Set, RS-6, complete, (RT-6, RA-6, RR-6, RP-6 accessory bag)	1 ea
Generator, GN-68, complete w/crank, legs and connecting cord	1 ea